

### **Abstract**

The present invention relates to optical glass having a high refractive index, high dispersion, and a low glass transition temperature; a preform comprised of the optical glass for precision press-molding and a method of manufacturing the same; and an optical element comprised of the optical glass and a method of manufacturing the same. An example of the optical glasses for precision press molding is characterized by comprising essential components in the form of  $P_2O_5$ ,  $Nb_2O_5$ ,  $WO_3$ ,  $TiO_2$ ,  $Bi_2O_3$ ,  $Li_2O$ , and  $Na_2O$ ; comprising optional components in the form of  $B_2O_3$ ,  $BaO$ ,  $ZnO$ ,  $K_2O$ ,  $Sb_2O_3$ , and  $As_2O_3$ ; where the content of  $Bi_2O_3$  exceeds 4 weight percent but does not exceed 15 molar percent; the content of  $Li_2O$  exceeds 3 weight percent but does not exceed 15 weight percent; the combined quantity of  $Nb_2O_5$ ,  $WO_3$ ,  $TiO_2$ , and  $Bi_2O_3$  is from 25 to 45 molar percent; the combined quantity of  $Li_2O$ ,  $Na_2O$ , and  $K_2O$  is less than or equal to 42 molar percent; the combined quantity of the essential components and optional components is greater than or equal to 98 molar percent; the refractive index ( $n_d$ ) is from 1.75 to 2.0; and the Abbé number ( $v_d$ ) is from 18 to 30.